

### REMARKS

This paper is filed in response to the Office Action mailed June 22, 2007, in which claims 1-46 are pending in the present application. Claims 1-3 and 15-46 are withdrawn from consideration and claims 4-9 and 11-14 are rejected. Claim 10 is objected to. Claims 4-10 and 12 have been amended herein. Claims 47-53 have been added.

### Claim Amendments

Support for the amendments to claims 4-10 may be found in claim 10 as originally filed and the specification in paragraph [0048]. Support for amendments to claims 4, the reciting solutions of silver nitrate and poly(vinyl pyrrolidone) in a solvent, may be found in paragraphs [0040], [0056], [0079], [0082], and [0102] describing the role of ethylene glycol as a solvent and naming alternative solvents such as 2,4-pentanedione, methanol, ethanol, water and their mixtures. Support for claims 47-53 may be found in claims 4 and 9 as originally filed, and paragraphs [0049] , [0080], and [0095] of the specification as filed.

### Rejection—35 U.S.C. 112, Second Paragraph

Claim 7 is rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant submits that the amended claim 7

overcomes any alleged indefiniteness. More particularly, amended claim 7 distinctly recites that the solution of silver nitrate in ethylene glycol and the solution of poly(vinyl pyrrolidone) in ethylene glycol are combined simultaneously with a *separate* volume of ethylene glycol.

**Rejection—35 U.S.C. 102(b)**

Claims 4-7 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Carotenuto *et al.*, Eur. Phys. J. B 16, 11-17 (2000). Applicants respectfully traverse this rejection because Carotenuto *et al.* does not each and every element of claims 4-7.

Carotenuto *et al.* disclose two methods for making polymer-colloidal silver nanocomposite samples. The first method consists of dissolving poly(N-vinyl pyrrolidone) (PVP) in ethylene glycol at room temperature and then adding silver nitrate and allowing the reaction to proceed at room temperature to form the colloidal silver nanocomposite. The second method consists of mixing a solution of silver nitrate in ethylene glycol and a solution of poly(vinyl pyrrolidone) in ethylene glycol while at room temperature and under constant sonication for the length of the reaction.

Amended independent claim 4 recites a method of manufacturing silver nanopyrramids. As stated by the Examiner in item 9, on page 4 of the Office Action, the prior art, including Carotenuto *et al.*, do not disclose or suggest the formation of nanopyrramids. Similarly, applicants wish to note that Carotenuto *et al.* do not disclose the manufacture of nanowires, as recited by added claims 47-53.

Furthermore, Carotenuto *et al.* does not disclose a method of selecting reaction conditions, such as specific ranges of elevated reaction temperatures, to select for a silver nanostructure having a desired shape and size as claimed by the Present Application. As such, amended independent claim 4, and those claims dependent therefrom, are patentable over Carotenuto *et al.*

Accordingly, applicants request that the rejection of claims 4-7 be removed.

Claims 4-7, 9 and 11 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Sun *et al.*, Nano Letters, vol. 2 no. 2, pp. 165-168, January 3, 2002, Sun *et al.*, Advanced Materials, 14, no. 11, pp. 833-837, June 5, 2002, and Sun *et al.*, Chem. Mater., no. 14, pp. 4736-4745, October 8, 2002.

Under 35 U.S.C. § 102(b), a publication is proper prior art if the publication is available and describes the invention more than one year prior to the date of application. The present invention claims priority of U.S. Provisional Application No. 60/432,098, filed on December 9, 2002. Therefore, a proper 102(b) publication, even if authored by the patent applicant, must have been published more than one year before December 9, 2002 (*i.e.*, before Dec. 9, 2001). None of the Sun *et al.* references relied on in the Office Action were published before December 9, 2001. As such, claims 4-7, 9 and 11 are patentable over the referenced Sun *et al.* publications.

Accordingly, applicants request that the rejection of claims 4-7, 9 and 11 be removed.

**Rejection—35 U.S.C. § 103(a)**

Claims 8 and 12-14 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Sun *et al.*, Advanced Materials, 14, no. 11, pp. 833-837, June 5, 2002, and Sun *et al.*, Chem. Mater., no. 14, pp. 4736-4745, October 8, 2002.

As stated previously, the present invention claims priority of U.S. Provisional Application No. 60/432,098, filed on December 9, 2002. Publications authored by the patent applicant and published during the 102(b) one-year grace period, *i.e.*, December 9, 2001 through December 9, 2002, under 102(b) are not proper prior art that would render the Present Application obvious. *Specialty Composites v. Cabot Corp.*, 845 F.2d. 981, 990, 6 USPQ2d 1601 (Fed. Cir. 1988). Sun *et al.* (June 5, 2002), and Sun *et al.* (October 8, 2002) were both published during the one-year grace period before December 9, 2002. As such, the Sun *et al.* references are not proper prior art references under 103(a) and, for at least this reason, claims 8 and 12-14 are patentable over the Sun *et al.* references.

Therefore, applicants request that the rejection of claims 8 and 12-14 be removed.

CONCLUSION

In view of the foregoing, it is believed that all of the claims are patentable in their present form, and a prompt notice of allowance for this case is respectfully requested. As mentioned above, if the Examiner finds any remaining impediment to the prompt allowance of this application, please contact the undersigned attorney.

DATED this 21<sup>ST</sup> day of November, 2007.

Respectfully submitted,

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